Ministry of Health

Information Resource Management Plan 2005/06

Knowledge Management and Technology Division

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Message from the Assistant Deputy Minister

In accordance with the *Budget Transparency and Accountability Act* and the *Government Core Policy*, I am pleased to present the 2005/06 Information Resource Management Plan for the Ministry of Health.

...the ministry continues to build a culture in which decisions are made on the basis of reliable evidence.

The Ministry of Health is committed to enhancing electronic health service delivery and improving the availability of timely and integrated health care information to aid clinical and management decision making. Consistent with the shift in its mandate to heath care system stewardship, the ministry continues to build a culture in which decisions are made on the basis of reliable evidence. Substantial progress has been made towards producing better health data, and the ministry is focused on improving the health system's analytical capacity to support decision making.

Accordingly, the ministry's Knowledge Management and Technology Division has been mandated to ensure a unified approach to the provision of accurate, relevant and timely health information, and to help build a health information structure through provincial and national partnerships.

The past year has been one with many challenges and many achievements. We have succeeded in establishing a new organizational structure within the ministry, and have redesigned many internal operating processes and external relationships with our partners and stakeholders. We have also made progress in improving data quality in our existing systems and in the integration of those systems, improving the input of ministry program areas into systems development planning, and in improving the access of decision makers to relevant and timely information. These achievements have increased the ministry's ability to analyze and use meaningful data as a foundation for its decisions.

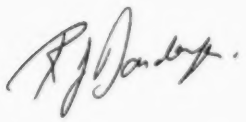
We have also established a provincial executive-level steering committee to provide impetus and strategic direction to the development of eHealth in British Columbia. The committee will ensure the coordination and integration of initiatives throughout the province to improve clinician and patient access to personal health data, including the Electronic Health Record and Telehealth initiatives.

We have worked closely with the health authorities and the health care provider communities to identify our eHealth needs. This has resulted in a number of funding agreements with Canada Health Infoway. We have also continued to work with the Western Health Information Collaborative to advance our common information technology objectives.

Our challenge is to increase the capacity of the ministry and the wider health system to generate, assimilate and utilize the vast amount of data available to us.

The year ahead will be one of consolidation and continuation, ensuring that the gains of the past year are maintained, extended and embedded within the ministry culture. The demand for high quality, timely and relevant data, and the information derived from it, is substantial and growing rapidly. Our challenge is to increase the capacity of the ministry and the wider health system to generate, assimilate and utilize the vast amount of data available to us. We must be able to assess and report on the capacity of the health care system to accommodate new medical interventions, drugs, accountability requirements, demographic pressures and unforeseen exigencies.

The tasks ahead are challenging, but I am confident that with clear goals and strategies, and the support of our senior leadership, ministry staff and stakeholders, we can continue to make significant improvements in the delivery of information, services and technology to support the business priorities of the ministry and the overall health system.



Ron Danderfer
Assistant Deputy Minister
Knowledge Management and Technology Division

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Executive Summary

The ministry's 2005/06 Information Resource Management Plan (IRMP) reflects provincial and health system re-design priorities in the context of global information security concerns.

The ministry's four key IM/IT strategies reflect its information resource management priorities, and support the ministry's core businesses and health goals.

The health information and technology management environment is complex, but its underlying principle is simple and clear: business needs determine information processing requirements, which in turn determine the appropriate technology infrastructure.

The ministry's four key IM/IT strategies reflect its information resource management priorities, and support the ministry's core businesses and health goals. These strategies are:

- Enhancing patient care by enabling province-wide integration of and access to clinically-required, person-specific data, while protecting personal privacy (such as an Electronic Health Record)
- Improving access to services, in all geographic areas of the province, through the increased use of technology and information systems (such as Telehealth)
- Improving the clinical and management utility of health data for decision making through broadened availability of quality data and analysis
- Expanding public access to health services and health information through web-based applications.

In developing the IRMP, ministry program areas were fully engaged in identifying their information management and technology requirements. In addition, a Capital Planning Executive Committee, composed of senior ministry program representatives, was established to review proposed initiatives for strategic value, urgency, cost saving, cost sharing and risk.

Major initiatives planned for 2005/06 include:

Aggregated Health Information Project (AHIP) – a strategic health information management framework for the ministry and the health authorities.

Bill 73 Technical Compliance – systems and applications changes to comply with the requirement to ensure that personal data is not moved outside of Canada.

BC Health Surveillance – improved access, delivery and integration of health care services for managing communicable diseases in BC.

BC Nurseline (BCNL) Chronic Disease Management Initiative – better information on patients registered in the Pharmacist Coach Medication Management program, and improved chronic disease patient self-management.

Diagnostic Imaging – exchange of diagnostic images and reports.

ePrescribing – ability for a physician to electronically generate prescriptions and link them to PharmaNet.

Provincial Laboratory Coordinating Office (PLCO) IM/IT – a laboratory test result sharing system, providing medical test information province-wide.

Wait List – improved information for the public wait list web site.

The Knowledge Management and Technology (KMT) Division is the information and technology management arm of the Ministry of Health. It is also responsible for the operation of the Vital Statistics Agency. KMT provides leadership and ensures that IM/IT strategies, policies, standards and technology initiatives support the integrated delivery of system-wide health information management. The division is responsible for the overall strategic development, implementation and evaluation of the ministry's information resource management plans and to foster an evidence based decision-making culture in the ministry.

In 2005/06, the KMT Division, including the Vital Statistics Agency, has an estimated operating budget of $42.45 million, an estimated capital budget of $34.46 million, and a projected staff complement of 268.5 full-time equivalents.

Planning Context

Improved information collection and management has been widely recognized as a priority area to assist health reform.

Provincial, national and global developments have all influenced this year's information resource management plan (IRMP). Provincially, the ministry's 2005/06 – 2007/08 service plan articulates the goals, objectives and strategies the ministry and its partners will be undertaking as we continue the redesign and reform of the health system. The overriding goal is to build a sustainable, publicly funded health system that will meet the needs of today's and future generations. To do this, the system is being redesigned to address the needs of the population in more innovative, effective and efficient ways. Utilizing cost-effective technology and information system solutions is a key component of the ministry's approach.

Nationally, a new ten-year health care agreement, signed by federal, provincial and territorial leaders, provides more certainty around federal funding for health care. This federal funding commitment, along with new funding from the province, will allow the ministry to invest in priority areas across the continuum of health care, to better meet the needs of British Columbians.

Globally, security issues have led to increased protection for the integrity of British Columbia's vital records and personal medical histories. The outbreak of SARS in 2003, along with Avian Flu in Asia and the lower mainland during 2004, heightened an awareness of the need for a pan-Canadian mechanism to collect, share, and analyze health information critical for managing communicable diseases.

Indicators of population health and medical outcomes from BC Stats and the Vital Statistics Agency suggest that British Columbia's health system continues to meet its major challenges. Life expectancy is rising every year, while mortality rates for conditions like cancer and chronic heart disease are steadily falling.[1] However, pressure on the system is growing. Individual demand for medical services rises steadily with age, and the first "baby boomers" are now entering their early sixties. British Columbians are living longer, and expect good health along with the medical support required to remain active.

Better use of information and communications technology is vital, if we are to meet the health and medical needs of British Columbians in the coming decades. Development of Electronic Health Record (EHR) capability has been identified as a key to health system renewal. In British Columbia, the 2005 report by the Premier's Technology Council reiterated its direction, first

1. Vital Statistics Agency; Annual Report 2003 and quarterly updates January-June 2004 (http://www.vs.gov.bc.ca/stats/annual/index.html)

...business needs determine information processing requirements, which in turn, determine the appropriate technology infrastructure.

stated in 2002, for the development of a provincial Electronic Health Record. This priority has also been stated in a number of other directional documents, including the ministry's service plan, the Select Standing Committee on Health's *Report 2002*, and more recently, the First Ministers' *10-year Plan to Strengthen Health Care.*

Improved information collection and management has been widely recognized as a priority area to assist health reform. The Auditor General's 2004 follow-up to his 2002 report, *Information Use by the Ministry of Health in Resource Allocation Decisions for the Regional Health Care System*, gave top marks to the ministry's efforts in the area of information management. The ministry will build on this foundation in the coming years.

Planning Process

The basic IM/IT business model is designed to support the decision-making needs of the health system and the day-to-day operations of the Ministry of Health. Information resource planning is an ongoing process, with the Information Resource Management Plan published annually. In developing the 2005/06 IRMP, an extensive consultation and planning process was undertaken with ministry program areas to identify their information management and technology requirements. In addition, a Capital Planning Executive Committee, composed of senior ministry program representatives, was established to review those requirements and proposed initiatives for strategic value, urgency, cost saving, cost sharing and risk.

The health information and technology management environment is complex, but its underlying principle is simple and clear: business needs determine information processing requirements, which in turn, determine the appropriate technology infrastructure. As shown in Figure 1, there are three broad levels in the basic business model: business needs, information processing, and underlying technology. The business needs determine the nature of the information required, and the technology makes the data from various sources available for the provision of such information. The model also shows the planning and process flows - two key areas of management control. Clear goals, appropriate strategies, adequate resource allocations and specific performance measures constitute the plans at both the strategic and operational levels, and provide the basis for KMT to stay focused on its mission.

Well-defined and integrated processes, along with effective tools and methodologies, facilitate the disciplined execution of the plans.

A more detailed depiction of the business environment, including stakeholders and specific KMT enabling features is shown in Appendix 1.

Figure 1 - Basic KMT Business Model

...collaboration is not only an effective strategy to facilitate the broad adoption of standards and best practices, it is essential to maximizing the value gained...

Ministry Core Businesses

The Ministry of Health has three core business areas:

- *Stewardship and Corporate Management*
- *Services Delivered by the Ministry of Health*
- *Services Delivered by Partners*

Stewardship and Corporate Management

As steward of the health system, the ministry provides leadership to health authorities and other partners. The ministry directs the health system as a whole through legislation, policy and service plans, and it sets service expectations through performance agreements with health authorities. It supports the system by using planning and projection tools to forecast services required to meet the health care needs of British Columbians in both the short and long term, as well as by researching and developing standards, guidelines and best practices to ensure services are safe, effective and efficient.

The ministry also monitors and evaluates system performance and the overall health of the population by collecting and analyzing health system data. By monitoring and evaluating the overall health system, the ministry is able to take evidence-based corrective action when necessary, and stay informed concerning future requirements for the development of sound service plans and performance agreements.

Corporate management includes managing ministry budgets, human resources and ongoing information needs. In order to properly fulfill the stewardship role, it is essential for the ministry to manage its underlying corporate functions in the most efficient and effective manner possible.

Services Delivered by the Ministry of Health

This core business encompasses two important public services: the B.C. Ambulance Service, which is delivered through the Emergency Health Services Commission, and the Vital Statistics Agency. Vital Statistics is a special operating agency delivering a provincial program centred on the registration of vital events, which include birth, stillbirth, death, and marriage. The agency registers all vital events occurring in British Columbia, and maintains registries and records of those events back to 1872.

Services Delivered by Partners

BC's health authorities, agencies and direct care providers are the ministry's key partners; they deliver the majority of health services to the public. These services span beginning to end-of-life care, disease prevention to health promotion, and primary to acute care.

Although the ministry does not directly deliver the majority of services that influence health outcomes, it bears ultimate responsibility for the health system. In recognition of this, the Services Delivered by Partners is a core business for the ministry.

Collaboration and sharing with partners is a priority for the ministry. With the demand for services increasing, collaboration is not only an effective strategy to facilitate the broad adoption of standards and best practices, it is essential to maximizing the value gained from the use of public funds. Appendix 2 describes the major partners and stakeholders, and indicates the basic nature of the collaboration with the KMT Division.

The mandate of KMT is to build capacity for the integration of data into daily operations and policy development, and to support the ministry's stewardship role.

The Knowledge Management and Technology Division

The Knowledge Management and Technology Division was created in November 2003 to consolidate the ministry's IM/IT systems into one portfolio in order to ensure a coordinated approach to this critical component of the ministry's business.

The mandate of KMT is to build capacity for the integration of data into daily operations and policy development, and to support the ministry's stewardship role. The division provides leadership to ensure that IM/IT strategies, policies, standards and technology initiatives support the integrated delivery of effective and efficient system-wide health information management. The division is responsible for the overall strategic development, implementation and evaluation of the information resource management plans of the Ministry of Health.

The Assistant Deputy Minister, KMT, is the chief advisor to the Minister and Deputy Ministers of Health on knowledge management and technology. The ADM bears the ultimate management responsibility for the KMT Division. The ADM is supported in this role by the KMT Executive Committee, which includes the ADM and KMT Executive Directors. The division's organization structure is shown in Appendix 1.

Strategic Context

Make strategic investments in information management and technology to improve care and system integration.

Vision

The ministry's vision is:

> "A health system that supports people to stay healthy, and when they are sick provides high quality publicly funded health care services that meet their needs where they live and when they need them."

Goals

The ministry's three goals are:

Goal 1: Improved Health and Wellness for British Columbians

> "British Columbians are supported in their pursuit of better health through health protection and promotion and disease prevention activities."

Goal 2: High Quality Patient Care

> "Patients receive appropriate, effective, quality care at the right time in the right setting. Health services are planned, managed and delivered in concert with patient needs."

Goal 3: A Sustainable, Affordable Publicly Funded Health System

> "The public health system is affordable, efficient and accountable, with governors, providers and patients taking responsibility for the provision and use of services."

In support of Goal 3, the ministry has determined that its IM/IT objective is to:

> "Make strategic investments in information management and technology to improve care and system integration."

IM/IT Strategies

The ministry has four key strategies that relate to the above IM/IT objective and support the ministry goals:

1. Enhancing patient care by enabling province-wide integration of and access to clinically-required, person-specific data, while protecting personal privacy (such as an Electronic Health Record)

2. Improving access to services, in all geographic areas of the province, through the increased use of technology and information systems (such as Telehealth)

3. Improving the clinical and management utility of health data for decision making through broadened availability of quality data and analysis

4. Expanding public access to health services and health information through web-based applications

An Electronic Health Record system provides the ability to electronically link together health information...

Strategy 1: Enhancing patient care by enabling province-wide integration of and access to clinically-required, person-specific data, while protecting personal privacy (such as an Electronic Health Record)

There is general agreement among governments in Canada that an Electronic Health Record system, providing secure access to a patient's health history and care events, would provide a substantial improvement to the effectiveness of patient care and enable system-wide efficiencies in health delivery. EHR has the potential to provide patients with safer, higher quality care; reduced duplication of tests and information collection; and improved access to their personal and authoritative general health information.

For many years, governments, health organizations and health service providers have been collecting information on the operation of the health system. While much of this information is general in nature (for example, the total numbers of orthopaedic surgeries performed in a region or in a specific hospital), much of it is also patient specific. However, it is typically provider or facility centric (for example, patient records held in a physician's office or a list of prescriptions provided at a local pharmacy).

Much of the patient-specific information is scattered across multiple systems, and is not always readily available to individual physicians or other service providers, at the time when health care decisions are being made. An Electronic Health Record system provides the ability to electronically link together health information to support clinical and management decision making, and help move the health care system towards a more seamless, integrated continuum of care.

The Electronic Health Record is more about changing business practices in health care than it is about information technology.

British Columbia is developing an Electronic Health Record capability. It is a cornerstone of government's comprehensive strategy to deliver faster and more effective treatment to patients. Enabling care providers to access clinical information, such as patient medication profiles, lab and other testing results, using web-based technology is a high priority. British Columbia's approach to implementing an EHR is to build on, and adapt over time, existing technology infrastructure, systems and data repositories.

Both the provincial and federal governments have committed to the development of an EHR, and a substantial part of the new federal health funding is targeted at improving health data, including the development of EHR capability. The province has recently formed an executive-level Electronic Health Steering Committee to accelerate the development and implementation of electronic health systems for British Columbia. The committee is a partnership between the ministry, the health authorities and the service provider community.

The Electronic Health Record is more about changing business practices in health care than it is about information technology. Building an EHR represents a major business challenge to health administrators. It involves change management for service delivery processes and information flows, as well as participation from business managers and clinical experts. It also requires new and innovative systems development, and integrated linkages between previously isolated systems and geographically separated communities.

The initiatives, in support of this strategic approach, tend to involve two broad areas:

- Updating existing clinical and data systems to enable and facilitate their linkage into a fully interoperable EHR system. This may include adjusting existing systems to improve their security controls, expanding the functions of existing systems to make them more useful to practitioners, or converting previous paper or film based systems to digital form for easier sharing and integration. Areas currently involved or being considered include; chronic disease management, drug prescribing and dispensing, digital imaging, as well as laboratory testing and results delivery.

- Developing new aligned infrastructure. Areas currently involved or being considered include; user authentication; patient and provider registries and identity management, as well as improved security for data storage and transmission.

A complete listing of business requirements and initiatives is contained in Appendix 3. The following briefly highlights some of the major initiatives in support of this strategy:

Authentication

Establish agreement on a common approach to two-factor, cross domain authentication in the health care sector in British Columbia for access to clinical information via a web portal and web-based applications. Pilot projects in several health authorities are being tested to determine the most suitable for use in BC.

Diagnostic Imaging

Implement a province-wide strategy to support the clinical needs of health care providers for the exchange of diagnostic images and reports between health authority diagnostic image storage systems. Detailed clinical and business requirements, as well as an IT strategy are to be completed in 2005, for implementation in 2006.

ePrescribing and Inclusion of In-hospital Medications in PharmaNet

This project will examine the feasibility and implementation strategies for automating a physician's ability to electronically generate a prescription and link it to the PharmaNet system. Additional point of care decision support functions such as drug interaction alerts, medication options and costs will also be examined, as will electronic delivery options (i.e. computer, Personal Digital Assistant, etc.). The project will also examine the feasibility and implementation strategies for including in-hospital medications in the PharmaNet system.

Provider Registry – Health Authority Uptake

Introduce Provider Registry use to all health authorities by implementation of a least one business application/access to the provincial Provider Registry in all health authorities. Develop a new access agreement strategy by 2006.

Provincial Client Identity Management

Implement a provincial enterprise master patient index system, supporting the effective and efficient client identity management necessary to facilitate patient care within and across health authorities and the ministry.

Telehealth is the use of communications and information technology to remotely link medical practitioners to their patients...

Provincial Laboratory Coordinating Office (PLCO) IM/IT

Develop a province-wide laboratory test result information system that will allow laboratory test information to be shared between locations within the province, providing physicians with more complete and relevant information to support medical decision making. The system will improve the efficiency of lab test ordering and results distribution, improve data aggregation, and facilitate provincial monitoring of services.

Strategy 2: Improving access to services, in all geographic areas of the province, through the increased use of technology and information systems (such as Telehealth)

Telehealth is the use of communications and information technology to remotely link medical practitioners to their patients, so they can deliver health care services over distance. It can be used to collect, organize and share information for patient assessment, diagnosis, and treatment. Telehealth can help overcome barriers of geography, transportation infrastructure, and socio-economic disparity. It is used to enable clinical consultation, continuing professional education, health promotion, and health care management, when the participants are in separate locations. Telehealth is especially useful in remote or under-serviced areas by helping to improve patient access to required medical services.

There are a number of telehealth activities currently taking place in British Columbia, including:

- planned consultations that allow patients of rural primary care providers who live in remote locations to receive medical assessment and care planning from medical specialists over a secure videoconferencing network, rather than traveling to receive these services;
- opportunities for practitioners in remote locations who are dealing with specific emergency situations to access medical specialists working in large teaching centres in Vancouver;
- follow-up care between the community hospital and the home of a recovering patient;
- digital image transfer between hospitals throughout BC and the Children's and Women's Health Centre of British Columbia, to assist in the expert care of children and women around the province; and
- virtual family visits for patients who are hospitalized far from home.

Since the middle of 2002, the responsibility for supporting province-wide planning, coordination, monitoring and evaluation of telehealth, including the development of provincial standards and guidelines, has rested with the Provincial Health Services Authority (PHSA). In the case of this strategy, PHSA works under the leadership of the eHealth Steering Committee, and in consultation with the other health authorities, the eLearning community, the UBC medical school, the Premier's Technology Council and the ministry. PHSA is responsible for providing leadership and support that will result in appropriate standards, policies and infrastructure to enable interoperable telehealth activity throughout the province, as well as a process for the coordinated development of a comprehensive British Columbia telehealth strategy.

Telehealth... is used to enable clinical consultation, continuing professional education, health promotion, and health care management...

Major areas of current focus in addressing this strategy, include:

- Securing funding to ensure the sustainability of existing eHealth initiatives and projects. This involves fast-tracking the identification of priorities and outlining a plan for the province, which aligns with Canada Health Infoway requirements, and supports both aboriginal and health authority identified needs. Funding is also being sought for work, in conjunction with the Western Health Information Collaborative, on the development and application of common terminology to allow for reporting and evaluation across jurisdictions.

- Expansion of virtual thoracic surgery clinics, telepharmacy solutions, wound care management, and mental health services are examples of activity planned for the coming year in several regions. A number of health authorities have implemented, or are in the process of implementing, large picture archiving and communication systems (PACS), which facilitate the movement and storage of digital images. Work processes within health authorities are beginning to be adapted so as to tap into the potential that digital storage and access has to offer.

- Changes to the Fee Schedule Preamble and for new fee codes to compensate physicians for provision of consultation services via telehealth are progressing. Codes for general practice; psychiatry; rheumatology; plastic surgery; pediatrics; dermatology; ophthalmology; and thoracic (chest) surgery have been submitted to the Medical Services Commission for approval.

A complete listing of business requirements and initiatives is contained in Appendix 3. The following briefly highlights two of the major initiatives in support of this strategy:

...management decisions in the field of health service delivery are to be made in a transparent manner, and should be based on clear and credible data.

BC Nurseline (BCNL) Chronic Disease Management Initiative

Assist nurses and pharmacists at BCNL with recording information on patients who are registered in the Pharmacist Coach Medication Management program, and improve the patients' ability to self-manage their chronic diseases.

Telehealth – Clinical Needs Assessment

The identification and prioritization of clinical telehealth services that can be successfully implemented to improve patient access to clinical services and ultimately improve patient health outcomes within the Northern Health Authority. The primary goal of the needs assessment is to ensure that any telehealth services developed are well integrated into service delivery models and are consistent with the needs of the north, and not simply driven by technology.

Strategy 3: Improving the clinical and management utility of health data for decision making through broadened availability of quality data and analysis

Much of the existing data collected has been maintained at local sites for use in managing the local operation, whether it be personal patient information to assist the management of care delivery, or organization, finance and staffing records to assist the management of the institution.

The collection of data at the regional, provincial or national level has more often been related to epidemiological data (incidence of disease in a large population) or life events (births, deaths, and cause of death). Much of this data has been used for long-term studies of health status, and whether it is improving or declining in various areas and for various reasons. The collection of this data has often been performed on an annual or even less frequent basis, where the timeliness of the data was not a major issue.

There is an increasing expectation that management decisions in the field of health service delivery are to be made in a transparent manner, and should be based on clear and credible data. The emergence of major demand and access issues, coupled with the recognition that funding for the health care system could not grow at the same rate as service demands, have heightened the recognition of a need for faster, more responsive management of the system.

The resultant demand for improved and more timely data has spurred a major review of existing data and clinical systems. The objective is to meet a heightened management requirement for data and information to make timely, evidence-based decisions.

The initiatives, in support of this strategy, tend to involve two areas:

- Modifying existing management information systems or developing new systems to accommodate the transition of the ministry from program delivery to health system stewardship. The intent is to improve the health system's human resource planning and monitoring, improve access to and reporting from health databases, and ensure the security of organizational and personal information.

- Enhancing systems or developing new systems to provide authoritative clinical health information to service providers and patients, in areas such as chronic disease management, emergency services and patient safety, especially in more remote locations.

A complete listing of business requirements and initiatives is contained in Appendix 3. The following briefly highlights some of the major initiatives in support of this strategy:

Aggregated Health Information Project

Develop and enable a strategic health information management framework for the Ministry of Health and health authorities to create an integrated, corporate information management environment capable of supporting new types of analyses.

BC Health Surveillance

Develop and implement a client and population-centred system to improve access, delivery and integration of health care services for managing communicable diseases in BC.

Bill 73 Technical Compliance

Ensure that the ministry's systems and applications comply with the Bill 73 requirement to ensure that personally identifiable data is not transferred outside of Canada.

Population Health and Wellness Data Strategy Implementation

Define requirements and a common data format for health authority reporting with respect to public health core functions. Such data will support the development of robust performance indicators and support development of the Provincial Health Officer's annual report on population health. This will include ongoing data refreshes from common sources, such as Home and Community Care, Vital Statistics Agency, BC Centre for Disease Control, etc.

It is becoming increasingly clear that the health care system must achieve similar benefits.

Provincial Surgical Services Project

The provincial surgical services project was initiated to address issues associated with surgical wait lists and access to surgical services in British Columbia. The project is led by the Provincial Health Service Authority, with the participation of regional health authorities and the ministry. By June 2006, the project will develop and implement a Surgical Patient Registry (SPR), a renewed provincial registry database with associated clinical information and business processes to improve surgical services. The evidence-based assessment tools within the SPR will ensure that patients are evaluated on the wait list according to clinical needs. The ministry will then have access to accurate, comprehensive, and timely data for decision making and reporting to the public.

Strategy 4: Expanding public access to health services and health information through web-based applications

The advent of the Internet has greatly expanded the familiarity of citizens with the use of computers. Increasingly, they rely on the Internet to gather information, conduct their day-to-day business, and handle their personal affairs.

Many commercial organizations in the service sector have recognized and taken advantage of major opportunities to improve the quality of client service by using the Internet, while at the same time, achieving substantial operating efficiencies. It is becoming increasingly clear that the health care system must achieve similar benefits.

The initiatives, in support of this strategy, focus on two distinct service aspects:

- Improving service delivery through electronic access to specific health services through redesign of the ministry web site and the chronic disease management web site, as well as investigating improved delivery of the BC NurseLine system, and alternative service delivery options for ministry programs.

- Improving information delivery through electronic access to basic health related information through the redesign of the ministry web site, as well as seeking new electronic delivery systems for BC HealthGuide and wait list information.

A complete listing of business requirements and initiatives is contained in Appendix 3. The following briefly highlights some of the major initiatives in support of this strategy:

BC Nurseline (BCNL) Chronic Disease Management Initiative

Assist nurses and pharmacists at BCNL with recording information on patients who are registered in the Pharmacist Coach Medication Management program, and improve the patients' ability to self-manage their chronic diseases.

Ministry of Health Web Site Development Project

Web site development and enhancement for the Ministry of Health program areas to improve public access to health information and services.

Wait List Web Site

Continue to improve the integrity of information reported from the BC surgical wait list. Maintain liaison with the Provincial Health Services Authority provincial wait list project.

Figure 2 below, illustrates the basic linkages between the ministry vision, ministry goals, the IM/IT objective, and the four IM/IT strategies.

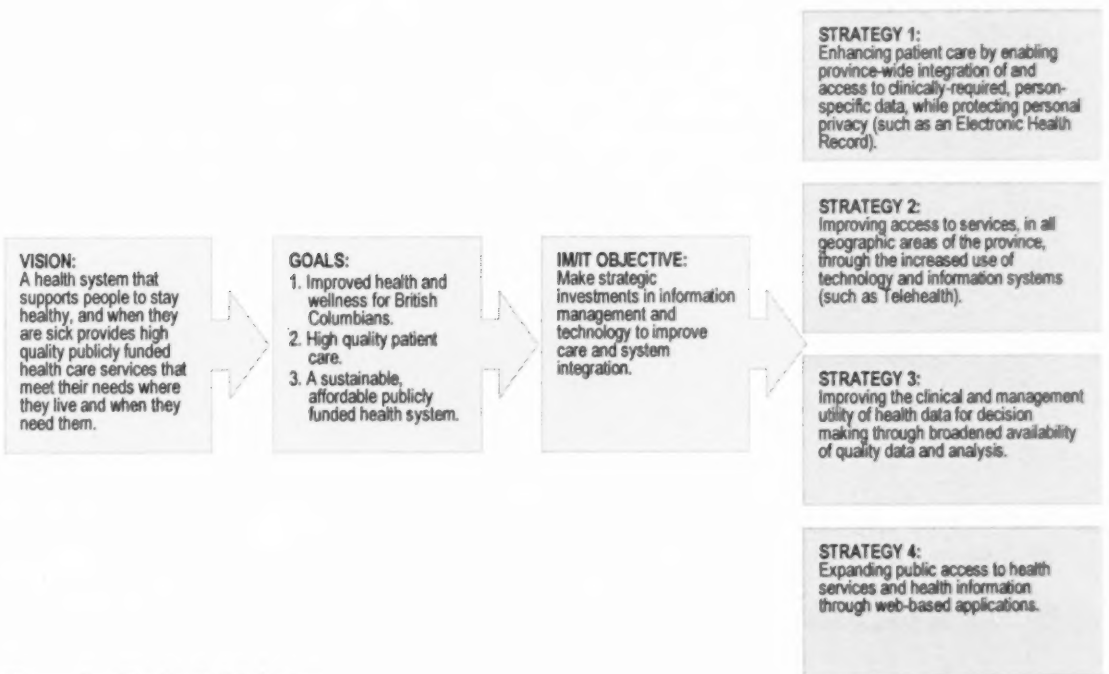

VISION:
A health system that supports people to stay healthy, and when they are sick provides high quality publicly funded health care services that meet their needs where they live and when they need them.
GOALS:
1. Improved health and wellness for British Columbians.
2. High quality patient care.
3. A sustainable, affordable publicly funded health system.
IM/IT OBJECTIVE:
Make strategic investments in information management and technology to improve care and system integration.
STRATEGY 1:
Enhancing patient care by enabling province-wide integration of and access to clinically-required, person-specific data, while protecting personal privacy (such as an Electronic Health Record).
STRATEGY 2:
Improving access to services, in all geographic areas of the province, through the increased use of technology and information systems (such as Telehealth).
STRATEGY 3:
Improving the clinical and management utility of health data for decision making through broadened availability of quality data and analysis.
STRATEGY 4:
Expanding public access to health services and health information through web-based applications.

Figure 2 – Strategic Linkages

In Closing

The above section highlights how key, proposed initiatives lined-up with the four ministry IM/IT strategies. In addition, the ministry IM/IT strategies support the four key government IM/IT goals: to enhance service and access for clients; to contain and reduce IM/IT costs across government; to improve internal operational efficiency and decision making; and to create an environment that supports provincial economic development.

The ministry evaluates the critical aspects of each initiative along with its partners, before making the decision to invest its limited resources. Each potential project will be thoroughly scrutinized for the strategic value it offers to the ministry, its partners and stakeholders; its urgency; its cost and return on investment; how it supports the ministry service plan; and how much potential risk is inherently associated with the project.

Once fully reviewed by the ministry's Capital Planning Executive Committee, a well-founded IM/IT investment decision can be properly justified, and the work undertaken with confidence.

Appendix 1: Knowledge Management and Technology Division

Resource Summary

Financial and Human Resource Estimates		
	2004/05 Budget (Restated)	2005/06 Budget (Proposed)
KMT Division (excluding Vital Statistics)		
Operating Expenditures	$ 27,005,000	$ 35,664,249
FTEs	145	183.5
Capital Expenditures		
Information Systems	$ 7,700,000	$ 7,700,000
Electronic Health Record		
Ministry		9,330,000
Canada Health InfoWay		14,480,000
Health Authorities		2,400,000
Total Capital	$ 7,700,000	$ 33,910,000
Vital Statistics Agency		
Operating Expenditures	$ 6,742,000	$ 6,786,000
FTEs	85	85
Capital Expenditures		
Information Systems	$ 525,000	$ 525,000
Furniture/Equipment	25,000	25,000
Total Capital	$ 550,000	$ 550,000
Revenue	$ 9,150,000	$ 9,249,000
KMT Division - Total		
Operating Expenditures	$ 33,747,000	$ 42,450,249
FTEs	230	268.5
Capital Expenditures	$ 8,250,000	$ 34,460,000
Revenue	$ 9,150,000	$ 9,249,000

Notes:

1. This chart summarizes the financial and human resources within the ministry allocated to Knowledge Management and Technology Division operations for 2004/05 and 2005/06.
2. 2004/05 figures have been restated for comparative purposes to reflect inter-ministry and intra-ministry transfers.
3. In addition to the above estimates for capital expenditures, BC Ambulance Services is allocated a capital budget for information systems capital expenditures.
4. In addition to the above estimates for capital expenditures, the Provincial Lab Coordinating Office is allocated capital budget for information systems capital expenditures.
5. The $2,400,000 in Health Authorities Capital Expenditures is included in the ministry's prepaid capital advance budget.

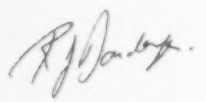
KMT Organization Structure

Figure 3 - KMT Organization Structure

Accountability Statements

I am the Assistant Deputy Minister of the Knowledge Management and Technology Division. I am accountable for the following results:

- Enable the consolidation and transformation of information technology and information management systems into one portfolio to ensure a coordinated approach in this critical area;
- Build the capacity for the integration of data into our daily operations and policy, and support our stewardship role;
- Provide leadership and ensure that the IM/IT strategies, policies, standards and technology initiatives support the integrated delivery of system-wide health information management; and
- Ensure the overall strategic development, implementation and evaluation of the Ministry of Health information resource management plans.



Ron Danderfer

I am the Executive Director of the Corporate Management and Operations Branch (CMO). I am responsible for strategic and business planning and policy, provision of business solutions to the ministry including Health Insurance BC, project management office, system capital budget management, financial oversight, and integrated informatics services. In addition to my overall responsibilities, I am accountable for the following specific deliverables in 2005/06:

- Develop sector-wide strategies for a heightened awareness of and commitment to provincial eHealth priorities in BC;
- Develop a framework for managing health technology assessment, and establish liaison capacity with the Canadian Coordinating Office for Health Technology Assessment (CCOHTA);
- Develop analytical capacity and provide integrated informatics services to the ministry;
- Streamline the management of system capital funds, including Canada Health Infoway investments;
- Develop a risk management framework, including information security; and
- Develop and implement a streamlined business consulting and resource allocation model.

Joan Elangovan

I am the CIO/Executive Director of the eHealth program. I am responsible for an effective development and implementation of eHealth projects across the province by working closely with the CIOs of the health authorities. In particular, I am responsible for ensuring development of the EHR, and ensuring interoperability across BC, while protecting privacy and security, as well as its compliance with standards. I also work with other jurisdictions to advance national eHealth strategies.

For eHealth projects, as identified and approved by the eHealth Steering Committee, the Leadership Council, and the Ministry, I am accountable for the following specific deliverables in 2005/06:

- Develop project charters;
- Provide project management support and coordination;
- Ensure that eHealth projects comply with the provincial eHealth architecture and standards;
- Ensure the execution of projects within timeline and budget, resolve or escalate issues where necessary;
- Monitor and report progress;
- Negotiate with Canada Health Infoway regarding project funding; and
- Identify and promote joint procurement and shared services within the health sector.

John Schinbein

I am the Executive Director of the Information Resource Management Branch (IRM) in the KMT Division. I am responsibility for the Ministry's Freedom of Information and Protection of Privacy program, and am accountable for the overall management of the IRM branch, and in collaboration with CMO, to ensure the integrity and cost-effective operation of the data capture and storage systems for health information used by the ministry and the health authorities. I am accountable for the following specific deliverables in 2005/06:

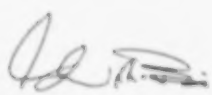
- Minimum reporting requirements, definitions and processes, developed in collaboration with the program areas, to enable the ministry to receive, validate and store data from the growing number of mental health and addiction systems in the regional health authorities;
- The annual update of the PURRFECT suite of application tools used to analyze utilization patterns of health care resources in communities;
- In collaboration with CMO, provide assurance that the ministry's systems applications comply with the Bill 73 requirement to ensure that personally identifiable data is not transferred outside of Canada;
- A database capacity that can integrate the existing Continuing Care Data Warehouse and the Home and Community Care minimum reporting requirements data to provide a consolidated picture of Home and Community Care services throughout the province;

- Secure access to depersonalized data for internal and external users, provided in accordance with the new Freedom of Information and Protection of Privacy legislation;
- Changes to the PharmaCare data mart to allow linkages of families and to add new data fields so as to facilitate better reporting and more insightful decision making;
- In collaboration with Medical and Pharmaceutical Services, provide an overall picture of physician reimbursement from government sources; and
- A more robust Physician Framework System, offering improvements that will allow analysis of utilization trends and facilitate cross-functional analysis of Medical Services Plan claims and other health data.

John Cheung

I am the Chief Executive Officer of the Vital Statistics Agency (VSA) in the KMT Division. I am accountable for the overall management of the VSA, and to ensure the integrity and cost-effective operation of the related data registries. I am accountable for the following specific results in 2005/06:

- A reduction in the number of days taken for 90% of births registered from 55 to 50 days (from the date of birth to receipt of the Registration of Live Birth form from the parents);
- An upgrade of the technology and data holdings in the Health Status Registry (HSR) to increase the value of the HSR by improving its accessibility, the quality of the data and the number of reporting sources;
- A comprehensive assessment of the feasibility of setting up a federal / provincial / territorial network that will allow vital event data to be delivered from "producing" organizations (the VSA) to authorized "subscribing" organizations (federal departments and the vital statistics organizations of other provinces and territories), including verification of key information;
- Cost-neutral assistance to the federal government in its efforts to improve the integrity of the Social Insurance Register, by combining the birth registration and SIN number application processes, and increasing the security associated with the issue of SIN numbers and birth certificates;
- Assumption of responsibility for operational management of the ministry Client and Provider Registries, including development of strategic and operational plans, policy review, and implementation of the Enterprise Patient Master Index;
- Enhanced utility for the VISTA warehouse, by increasing the functionality and information provided to users of vital event information; and
- Enhanced registration and vital statistics services through increased use of public sector partnerships.



Andrew K. McBride

I am the Executive Director of the Health Information Technology Branch in the KMT Division. I am accountable for the overall direction and management of the Pan-Canadian Health Surveillance Project and the Aggregated Health Decision Support Information Initiative, as well as the development of a communicable disease surveillance system capacity within the province. In addition to these general responsibilities, I am accountable for delivery of the following results in 2005/06:

- Provide leadership and advice for implementation of the Pan-Canadian system;
- Develop and implement the British Columbia Communicable Disease Surveillance system;
- Co-ordinate with Health Authorities and Service Providers, physicians, etc., in the development of alert and tracking systems;
- Provide leadership for the development of the Aggregated Health Information Project; and
- Promote and manage knowledge transfer, and facilitate the improved use of data through new technology.

Clyde Macdonald

Business Environment

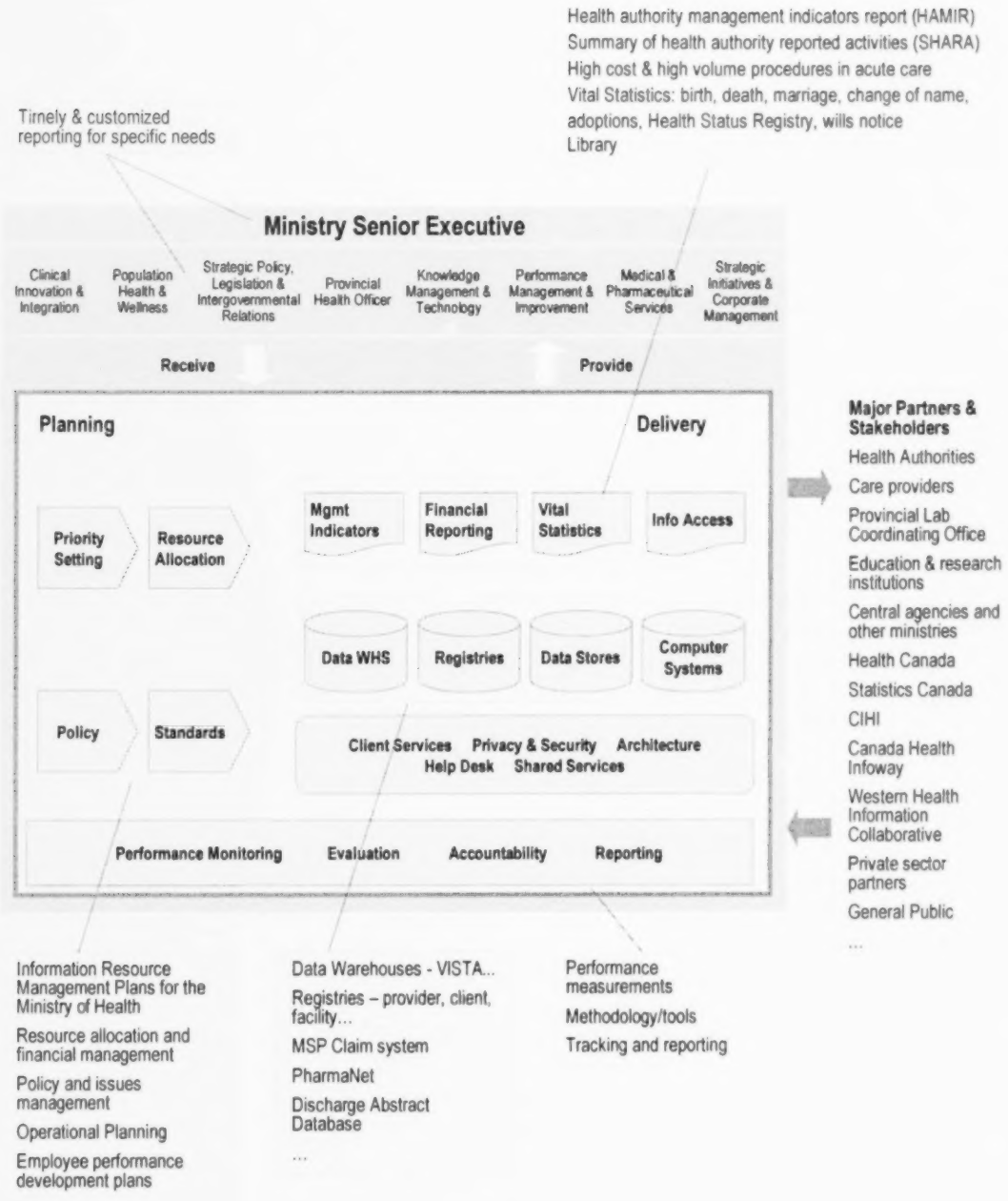


Figure 4 – Business Environment

Appendix 2: Key Stakeholders and Partners

The ministry's information resource management activities involve a broad range of public and private partners – national, provincial, and provincial government. Key stakeholders and partners include:

National

Canada Health Infoway (Infoway)

Infoway's mandate is to accelerate the development and adoption of electronic health information systems in Canada. An independent, not-for-profit corporation, Infoway is a partnership of federal, provincial, and territorial governments. It has $ 1.1 billion in capital to invest with partners to develop and deploy robust, reusable, interoperable Electronic Health Record solutions, and replicate them throughout the health care system. BC has received funding from Infoway for two projects: Provider Registry ($4.5 million) and Diagnostic Imaging ($11.8 million). Further commitments of $9 million for Client Identity Management and an additional $6 million for Diagnostic Imaging have also been made.

The ministry, in conjunction with the health authorities, works with Infoway to plan future collaboration opportunities for the Provincial Lab Reporting System, adding electronic prescribing capability to the existing PharmaNet system, and province-wide care provider authentication and access control.

Canadian Institute for Health Information (CIHI)

The CIHI is an independent, pan-Canadian, not-for-profit organization working to improve the health of Canadians and the health care system by providing quality, reliable and timely health information.

The ministry works with CIHI, and makes extensive use of its health information functions to develop and manage health databases and registries; conduct research and analysis; develop national health indicators; coordinate and promote the development of national health information standards; and disseminate health information.

Health Canada

Health Canada is the federal government's focal point for eHealth, multi-channel government service delivery, and privacy issues.

The ministry works with Health Canada on a number of projects, including the Annual BC Profile Update.

Identity Council for Canada

The Identity Council provides support for the Vital Statistics Council Committee for Standards Development, oversight of the National Routing System Pilot project, and is responsible for adoption of a national identity framework at the federal level.

Statistics Canada

Statistics Canada has two main objectives: provide statistical information and analysis about Canada's economic and social structure, and promote sound statistical standards and practices.

The registration of all live births, stillbirths, deaths, and marriages that occur in the Province of British Columbia are submitted to Statistics Canada for the compilation of national statistics for these vital events. The ministry, through the Vital Statistics Agency, identifies and reports problems and errors using automated coding systems for generating International Classification of Disease (ICD) codes.

Vital Statistics Council for Canada

The Vital Statistics Council for Canada is an advisory group composed of the heads of the vital statistics divisions/agencies from the provincial and territorial governments and the Health Statistics Division of Statistics Canada. The council provides a forum for developing common approaches for collecting vital statistics, sharing information with external parties (e.g. social services departments, law enforcement agencies, individuals), and for facilitating problem solving by sharing experiences, research findings and expertise among the jurisdictions. BC currently chairs the council.

Western Health Information Collaborative (WHIC)

A process initiated in 1999 by the Western Premiers and Deputy Ministers of Health; WHIC explores collaborative opportunities with respect to health infostructure initiatives.

One of the major successes of WHIC has been the joint development of the Provider Registry, led by BC. Additional functionality for the registry is currently being added through funding by Canada Health Infoway. The ministry has ongoing engagement with WHIC, through the WHIC Leaders Forum.

Provincial

BC Health Information Standards Council (BCHISC)

The BCHISC advises the Ministry of Health on health information standards and guidelines that should be adopted across the province, in alignment with national and international standards, to promote effective and efficient information sharing in the health system. It brings together an informed and experienced group of health system representatives, including physicians, nurses, pharmacists, and other technical specialists.

British Columbia Medical Association (BCMA)

BCMA is a voluntary association which represents 95% of the doctors practicing in British Columbia. The role of the BCMA is to advance the practice and science of medicine and the health of British Columbians by working for the improvement of medical education, health care legislation, hospital and other health services.

The Information Technology Advisory Committee is a forum for communication between the Ministry of Health and the BCMA on the strategic direction and application of information management and information technology. This committee is also an advisory body on IM/IT issues that may impact physicians and the rest of the health system.

Chief Information Office of BC

The office provides government-wide leadership and strategic direction in the management of IM/IT resources. It establishes and manages the IM/IT governance framework. The office leads the transformation of government operations to electronic service delivery, and develops strategies to help position British Columbia's citizens and businesses to participate in the global economy.

The ministry commits significant resources to cross-government IM/IT activities, including sharing methodologies (e.g. project management) and information (i.e. via advisory committees).

College of Pharmacists

The College of Pharmacists of British Columbia is the licensing and regulatory authority for the profession of pharmacy and its practice environment. The college obtains its authority from the Pharmacists, Pharmacy Operations and Drug Scheduling Act, and is accountable to the public.

College of Physicians and Surgeons

The College of Physicians and Surgeons of British Columbia is a statutory body established by the Provincial Legislature in 1886. It is composed of physicians registered in the province to practice medicine and surgery.

The functions of the college are to: protect the public, maintain the standards and honour of the profession, establish rules for the proper professional conduct of its members, determine qualifications for registration and licensure, and to evaluate the competence and conduct necessary to maintain registration and licensure.

Common Information Technology Services (CITS)

Services provided by CITS include integrated, common IT services, finance and administration services, payroll services, as well as procurement and supply services.

The ministry works with CITS to clarify its outsourcing strategy and information technology decision-making process, service levels, costing models, the government migration strategy for mainframe/legacy systems, and cost implications for remaining legacy users.

Electronic Health Steering Committee

The Electronic Health Steering Committee is a partnership between the ministry, the health authorities, and physicians' representatives. The committee provides leadership in matters ranging from strategy, governance structure, and financial arrangements to implementation approaches to ensure an effective electronic health system in British Columbia.

The BC Health Information Standards Council, the Health CIO Council, the Provincial Lab Coordinating Office, and the Telehealth Steering Committee all report to the Electronic Health Steering Committee.

Health Authorities

The health authorities have the main responsibility for delivering health services for the province. The six health authorities are: Northern Health Authority, Interior Health Authority, Fraser Health Authority, Vancouver Coastal Health Authority, Vancouver Island Health Authority, and the Provincial Health Services Authority.

The ministry receives data from and provides information to BC's health authorities. It also works with the health authorities at the IM/IT planning and project level through the leadership of the Electronic Health Steering Committee.

Health CIO Council

The Health CIO Council consists of the chief information officers of the ministry and the six health authorities. The purpose of the council is to establish and implement a unified provincial IM/IT vision and plan for the provincial health care system, and to ensure that collaboration mechanisms and common approaches, where practical, are in place to foster business success.

Provincial Lab Coordinating Office (PLCO)

The PLCO is charged with developing a patient-centred lab service system for British Columbians that can provide for high quality, affordable, and accessible service. The PLCO is part of a comprehensive initiative to renew lab service delivery in the province, and ensure better coordination of lab test results for patients.

The ministry works with the PLCO to develop an information system that will be more efficient (in its use of people, processes, and technology), prevent the needless duplication of testing, and provide for better patient care.

Telehealth Steering Committee

Coordinated through the Provincial Health Services Authority, the Telehealth Steering Committee has representation from the six health authorities, the CIO Council, medical schools, the ministry, and the Premier's Technology Council.

The committee identifies and defines provincial priorities for telehealth that respect health authority and provincially identified health care needs, and aligns them with strategies identified by Infoway for potential funding.

Universities

The ministry works with a number of colleges and universities on a variety of health information issues. They include: the BC Academic Health Council to explore collaboration opportunities between health and education sectors; the School of Health Information Science at the University of Victoria to develop curriculum on health information management and physician education; the BC Institute of Technology to examine health care technology issues; and Simon Fraser University to establish a partnership whereby the Vital Statistics Agency will share its existing warehouse technology with the university, and in turn, the university will assist with ongoing development and will be the clearinghouse for academic users requesting access to the warehouse for research or teaching purposes.

Appendix 3: Business Requirements and Initiatives

The following is an alphabetical listing that briefly highlights the business requirements and initiatives identified through an extensive consultation and planning process with the ministry program areas. As projects proceed, detailed project charters will be available through the ministry's Project Management Office.

Information resource planning is an ongoing process. Additional business requirements and initiatives may be identified throughout the year.

Addictions Minimum Reporting Requirements (ADD-MRR)

Identify the minimum reporting requirements, definitions and processes required to enable the ministry to accept, validate, store and report on data from the growing number of mental health and addictions systems in the regional health authorities.

Aggregated Health Information Project (AHIP)

Develop and enable a strategic health information management framework for the Ministry of Health and health authorities to create an integrated, corporate information management environment capable of supporting new types of analyses.

Alternative Service Delivery (ASD) Governance Support and Interfaces

The government has selected MAXIMUS Inc. to work with the province on developing an alternative service delivery model for the Medical Services Plan (MSP) and PharmaCare. This initiative focuses on carefully defining the complex business processes required to facilitate change management and knowledge transfer in support of the ASD agreement.

Annual PROFILES

Produce the annual PROFILES report, which describes patterns of practice for licensed medical and health care practitioners within the province.

Annual PURRFECT Update

Update to the PURRFECT suite of application tools used to analyze the utilization patterns of health care resources in communities.

Authentication

Establish agreement on a common approach to two-factor, cross domain authentication in the health care sector in British Columbia for access to clinical information via a web portal and web-based applications. Pilot projects in several health authorities are being tested to determine the most suitable for use in BC.

BC Health Surveillance

Develop and implement a client and population-centred system to improve access, delivery and integration of health care services for managing communicable diseases in BC.

BC HealthGuide Program (BCHG) - BC Nurseline (BCNL)

Assist the BCHG in information technology activities related to the joint solutions request for proposal with respect to a new BCNL contract.

BC Nurseline (BCNL) Chronic Disease Management Initiative

Assist nurses and pharmacists at BCNL with recording information on patients who are registered in the Pharmacist Coach Medication Management program, and improve the patients' ability to self-manage their chronic diseases.

Bill 73 Technical Compliance

Ensure that the ministry's systems and applications comply with the Bill 73 requirement to ensure that personal identifiable data is not transferred outside of Canada.

Birth Registration

Significantly reduce the number of days between the date of birth and receipt of the Registration of Live Birth form.

British Columbia Ambulance Services Patient Care Information System Project

Enhance the quality, timeliness and completeness of patient care information available to the BC Ambulance Service for operational, business intelligence and medical research purposes.

Clinical Portal & Web Service – eHealth Gateway for Providers

Create a proof of concept for provider access to clinical information using web-based portal technology.

Continuing Care Information Management System Retirement Phase 2 – Integrated Database

Provide a consolidated picture of Home and Community Care services throughout the province by creating a database that will integrate the existing Continuing Care Data Warehouse and the Home and Community Care Minimum Reporting Requirement data.

Data Access and Encryption – Implementation

Provide secure access to depersonalized health data for internal and external users, while adhering to the new Freedom of Information and Protection of Privacy legislation.

Diagnostic Imaging

Implement a province-wide strategy to support the clinical needs of health care providers for the exchange of diagnostic images and reports between health authority diagnostic image storage systems. Detailed clinical and business requirements, as well as an IT strategy are to be completed in 2005, for implementation in 2006.

Electronic Medical Summary (eMS)

An Electronic Medical Summary is a system to deliver a standard subset of patient data suitable for communication among practitioners sharing the care of an individual patient. The prototype system and standards will provide the integration and interoperability between disparate electronic medical record systems and primary care physicians. This is intended to support the processes associated with patient referral, on-call, and emergency intervention. An eMS standard is to be completed and tested in two health authorities by 2006, with full provincial implementation thereafter.

Enhancements to the PharmaCare Data Mart

Implement changes to the PharmaCare Data Mart to allow linkages of families, and to add new data fields. This will facilitate better reporting of information, and more insightful decision making.

ePrescribing and Inclusion of In-hospital Medications in PharmaNet

This project will examine the feasibility and implementation strategies for automating a physician's ability to electronically generate a prescription and link it to the PharmaNet system. Additional point of care decision support functions such as drug interaction alerts, medication options and costs will also be examined, as will electronic delivery options (i.e. computer, Personal Digital Assistant, etc.).

The project will also examine the feasibility and implementation strategies for including in-hospital medications in the PharmaNet system.

Health Authority Health Human Resource Planning (HHRP) Report Requirements

Conduct an assessment of what health authorities are tracking within their systems, and the process of reporting to the ministry. Deliverables will include a strategy for health authority HHRP reporting, a business systems options document, and a proposal for a solution to be implemented in the 2006/07 fiscal year.

Health Authority Physician Reimbursement

Provide an overall picture of physician reimbursement from government sources.

Health Status Registry Rejuvenation

Increase the number of reporting sources, quality of the data, and accessibility to the Health Status Registry.

Home and Community Care (HCC) – Income and Rates Setting

Develop an application that will allow health authorities to undertake rate notification for their HCC clients, and provide follow-up information to case managers, clients and families.

Home and Community Care Reporting to CIHI

Development, as per the agreement with CIHI, of the prototype model to be used by all Canadian jurisdictions for the supply of Home and Community Care data on a regular basis to a national Home Care Reporting System (HCRS). The information allows national analysis of service setting, utilization, population characteristics and outcomes, as well as useful comparisons between jurisdictions.

HOOPC II – Phase 3

Replace the older, DOS/Clipper-based Out of Province System (OOPS) by enhancing the existing HOOPC (Hospital Out of Province Claims) web-based system to handle many of the functions currently handled by OOPS, and extend the capabilities to meet the requirements of other provinces.

Hospital PharmaNet Strategy

Develop and implement a strategy for physician access to PharmaNet drug profiles within health authority facilities, beyond the current emergency departments and in-house pharmacies.

HSCIS Health Human Resources Planning (HHRP) Report Requirements

Conduct a business systems options investigation of alternatives for accessing data and reporting from the Health Sector Compensation Information System (HSCIS) for HHRP, and outline the business requirements and potential solutions.

Improved Financial Tracking and Reporting Systems and Business Processes

Define, design, build and implement replacements for the current MS Access and MS Excel ministry financial management tracking and reporting systems. Replacement systems will involve modern database and web architecture.

Interactive Health System Simulator

Enhance the system implemented last year. The application simulates the BC health system, and will enable the ministry to apply different scenarios against the model to determine the potential impact of various changes.

Ministry of Health Web Site Development Project

Web site development and enhancement for the Ministry of Health program areas to improve public access to health information and services.

National Routing Pilot

Demonstrate the feasibility of setting-up a federal/provincial/territorial network that will allow vital event data to be delivered from producing organizations (Vital Statistics Agency) to authorized subscribing organizations (federal government departments and the vital statistics organizations of other provinces and territories). This will include verification by federal government departments (the Passport Office) of vital event information from vital event certificates issued by provincial and territorial vital statistics organizations.

NETCAD Computer Aided Dispatch

Acquire and implement a single computer aided dispatch system to be used by all functional dispatch areas within the BC Ambulance Service.

Network PNG Implementation

Provide secure, reliable interconnection of all provincial health authority networks.

Patient Safety Project

Conduct a business systems options review that will lay out the current situation, the alternatives to consider, and recommend a solution to improve patient safety.

PharmaCare LANFAX Replacement

Review the current LANFAX system to determine alternatives and a recommended approach.

Physician Connectivity

Provide secure, efficient access to the Northern Health Authority wide area network for all Northern Health physicians.

Physician Framework System Enhancements and Revisions

Provide a more robust Physician Framework System with a series of improvements that will allow analysis of utilization trends, and facilitate cross-functional analysis of Medical Services Plan claims along with other data.

Population Health and Wellness Data Strategy Implementation

Define requirements and a common data format for health authority reporting with respect to public health core functions. Such data will support the development of robust performance indicators and support development of the Provincial Health Officer's annual report on population health. This will include ongoing data refreshes from common sources, such as Home and Community Care, Vital Statistics Agency, BC Centre for Disease Control, etc.

Provider Registry Enhancements

To complete the final phase of the WHIC Provider Registry implementation. The main enhancement is to incorporate HL7 version 3 message support functionality to meet national standards and to implement the BC version.

Provider Registry - Health Authority Uptake

Introduce Provider Registry use to all health authorities by implementation of a least one business application/access to the provincial Provider Registry in all health authorities. Develop a new access agreement strategy by 2006.

Provincial Client Identity Management

Implement a provincial enterprise master patient index system, supporting the effective and efficient client identity management necessary to facilitate patient care within and across health authorities and the ministry.

Provincial Laboratory Coordinating Office IM/IT

Develop a province-wide laboratory test result information system that will allow laboratory test information to be shared between locations within the province, providing physicians with more complete and relevant information to support medical decision making. The system will improve the efficiency of lab test ordering and results distribution, improve data aggregation, and facilitate provincial monitoring of services.

Provincial Surgical Services Project

The provincial surgical services project was initiated to address issues associated with surgical wait lists and access to surgical services in British Columbia. The project is led by the Provincial Health Service Authority, with the participation of regional health authorities and the ministry. By June 2006, the project will develop and implement a Surgical Patient

Registry (SPR), a renewed provincial registry database with associated clinical information and business processes to improve surgical services. The evidence-based assessment tools within the SPR will ensure that patients are evaluated on the wait list according to clinical needs. The ministry will then have access to accurate, comprehensive, and timely data for decision making and reporting to the public.

Quantum Analyzer

Enhance the system implemented last year. This management information presentation tool brings different types of summary data together into a single, shared knowledge base.

Rural Health Travel Program – Reporting System

A reporting system for the Rural Health Travel Program, which in turn provides rural residents of BC access to non-emergency services that are not available in their own community.

Social Insurance Number (SIN) Registry Interface

Assist the federal government, in a cost-neutral manner, in its effort to improve the integrity of the Social Insurance Register, and provide seamless registration services for British Columbia newborns by combining the birth registration and SIN number application processes. Where possible, this initiative will also increase the security associated with the issue of SIN numbers and birth certificates, through the mutual confirmation of client information.

Telehealth – Clinical Needs Assessment

The identification and prioritization of clinical telehealth services that can be successfully implemented to improve patient access to clinical services and ultimately improve patient health outcomes within the Northern Health Authority. The primary goal of the needs assessment is to ensure that any telehealth services developed are well integrated into service delivery models and are consistent with the needs of the north, and not simply driven by technology.

VISTA Enhancement

Enhance the utility of the VISTA warehouse by increasing functionality and information provided to users of vital event information.

Wait List

Continue to improve the integrity of information reported from the BC surgical wait list. Maintain liaison with the Provincial Health Services Authority provincial wait list project.